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# City of St. Charles

## 2008 Annual Water Quality Report



**This report is intended to provide you with important information about your drinking water and the efforts made to provide safe drinking water and are required by Missouri Department of Natural Resources under Safe Drinking Water Commission Regulations # 10 CSR60-8.030.**

### *What is the Source of My Water?*

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

#### *Our Water Comes From the Following Sources:*

Source Name	Type
Well #4	Ground Water
Well #5	Ground Water
Well #6	Ground Water
Well #7	Ground Water
Well #8	Ground Water
CC 1 St. Louis City MO6010715	Surface Water
Well #9	Ground Water



### *Important Health Information*

Do I need to take any special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general public. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).



### *Community Involvement*

The St. Charles City Council has the responsibility of making decisions regarding contractual agreements and expenditures of funds for the water division. You are invited to attend regularly scheduled meetings, which are held on the first and third Tuesday of each month in the City Hall Council Chambers located at 200 North Second Street. For more information, visit [www.stcharlescitymo.gov](http://www.stcharlescitymo.gov).



### *What are the Contaminants in my Water?*


Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants & potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791). Contaminants that may be present in source water include:

- A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
  - B. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
  - C. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
  - D. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
  - E. Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.
- In order to ensure that tap water is safe to drink, the Department of Natural Resources prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.





REGULATED CONTAMINANTS							
Regulated Contaminants	Collection Dates	Highest Value	Range	Unit	MCL	MCLG	Typical Source
BARIUM	08/21/08	0.0707	0.0707	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits Natural deposits; Water additive which promotes strong teeth Runoff from fertilizer use, leaching from septic tanks, sewage; Erosion of natural deposits
FLUORIDE	08/21/08	0.92	0.92	ppm	4.0	4	
NITRATE+NITRITE (AS N)	02/14/08	1.9	1.9	ppm	10	10	
Lead & Copper	Date	90 <sup>th</sup> Percentile	Range	Unit	AL	Sites Over AL	Typical Source
COPPER	2005-2007	0.0423	0.00135-0.0986	ppm	1.3	0	Corrosion of household plumbing systems
Microbiological	Result	MCL	MCLG	Typical Source			
No Detected Results Were Found in The Calendar Year of 2008							
Secondary Contaminants	Collection Date	Highest Value	Range	Unit	MCL	MCLG	
ALKALINITY, CaCO <sub>3</sub> STABILITY	08/21/08	80.9	80.9	MG/L			
ALKALINITY, TOTAL	08/29/05	84.9	84.9	MG/L			
CALCIUM	08/21/08	29	29	MG/L			
CHLORIDE	08/21/08	14.7	14.7	MG/L	250		
HARDNESS, CARBONATE	08/21/08	104	104	MG/L			
IRON	08/21/08	0.0101	0.0101	MG/L	0.3		
MAGNESIUM	08/21/08	7.54	7.54	MG/L			
MANGANESE	08/21/08	0.0026	0.0026	MG/L	0.05		
pH	08/21/08	9.76	9.76	pH			
POTASSIUM	08/21/08	1.69	1.69	MG/L			
SODIUM	08/21/08	12.1	12.1	MG/L		20	
SOLIDS, TOTAL DISSOLVED (TDS)	08/21/08	175	175	MG/L	500		
SULFATE	08/21/08	32.4	32.4	MG/L	250		





RESELLER CONTAMINANTS					
Detected Contaminants (units)	MCL	MCLG	Average Level Detected	Range	Major Source of Contaminants
Inorganic Compounds					
BARIUM	2	2	0.0128	0.0098-0.0157	Erosion of Natural Deposits
FLUORIDE	4	4	1.00	0.40-1.90	Water Additive for Dental Health
NITRATE+NITRITE (AS N)	10	10	2.65	2.58-2.72	Natural Deposits; Fertilizer Runoff
LEAD	AL = 15	0	90 <sup>TH</sup> Percentile = 1.26	Number of Samples Above AL = 0	Corrosion of Household Plumbing
COPPER	AL = 1.3	1.3	90 <sup>TH</sup> Percentile = 0.0496	Number of Samples Above AL = 0	Corrosion of Household Plumbing
Microbiological Data					
TOTAL COLIFORM BACTERIA	5% of Monthly Samples Positive	0	Highest Month: 0.48% (October) Annual Average: 0.04%		Naturally Present in the Environment
TOTAL ORGANIC CARBON	TT (Required min. 15% TOC removal from source water)	N/A	2.91	Annual Avg. % Removal of TOC in Finished Water = 42.1%	Naturally Present in the Environment
TURBIDITY (NTU)	TT (1NTU) TT = 95% of Monthly Samples <0.3 NTU	N/A	Highest Level = 0.11 Percentage of Samples Below 0.3 NTU = 100%		Soil Runoff

Secondary Contaminants	MCL	Average Level Detected	Range
ALKALINITY, TOTAL	N/A	53.5	21 - 98
CALCIUM	N/A	26.3	18.8 - 34.7
CHLORIDE	250	22.7	15.5 - 40.5
HARDNESS, TOTAL	N/A	118	68 - 186
IRON	0.3	0.0138	0.002-0.0410
MAGNESIUM	N/A	12.1	6.9 - 19.7
pH	N/A	9.16	7.89 - 9.97
POTASSIUM	N/A	5.22	2.84 - 8.56
SODIUM	N/A	24.9	14.6 - 36.4
SOLIDS, TOTAL DISSOLVED (TDS)	500	240	184 - 328
SULFATE	250	91.5	58.5 - 197.1

### Violations & Health Effect Information

During the 2008 calendar year, we had the below noted violation(s) of drinking water regulations:

**No Violations Occurred in the Calendar Year of 2008**

During the 2008 calendar year, the water system that we purchase water from had the below noted violation(s) of drinking water regulations:

**No Violations Occurred in the Calendar Year of 2008**

### Definitions

MCLG: Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety. MCL: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow. TT: Treatment technique, a required process intended to reduce the level of a contaminant in drinking water. 90 percentile: For lead and copper testing. 10% of test results are above this level and 90% are below this level. - Level Found: is the average of all test results for a particular contaminant. - Range of Detections: Shows the lowest and highest levels found during a testing period, if only one sample was taken, then this number equals the Level Found.

### Abbreviations:

PPB: parts per billion or micrograms per liter · ppm: parts per million or milligrams per liter · n/a: not applicable · NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water · MFL: million fibers per liter, used to measure asbestos concentration. · nd: not detectable at testing limits.

The state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Records with a sample year more than one year old are still considered representative.

EVERY  
DROP  
COUNTS